



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*SN*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/501,602 02/10/00 HUANG

M TTX0163-US

Michael D Bednarek  
Crowell & Moring LLP  
1001 Pennsylvania Avenue N W  
Washington DC 20004-2595

IM22/0718

EXAMINER

TSANG, S

*- 703-305-0588*

ART UNIT

PAPER NUMBER

1745

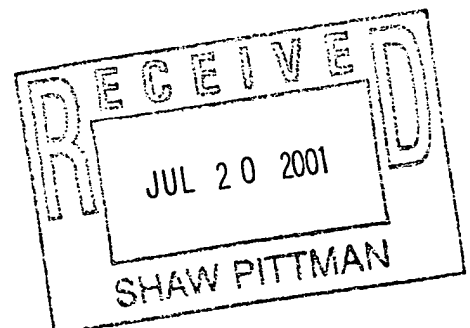
DATE MAILED:

07/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Due 3mo Response  
Date 10-18-01  
Docketed 7-20-01



**Office Action Summary**

Application No.

09/501,602

Applicant(s)

Ming Yu Huang

Examiner

Susy N Tsang

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☒ Claim(s) 1, 2 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words (15 lines maximum, rule change, effective November 7, 2000). It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because legal phraseology is used.

Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

4. Claims 1 and 2 are objected to because of the following informalities: In claims 1 and 2, the phrase "predetermined force" is awkward because the word "predetermined" used in the phrase is redundant since the force is claimed as being applied so that the at least one o-ring and the at least one recess are separated. It is suggested to the applicants to rewrite the phrase "predetermined force" as "force". Appropriate correction is required.

Art Unit: 1745

5. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claim 6, the limitation "said anode is consisted of zinc" does not further limit claim 1 since the anode had electrolyte in it as claimed in claim 1 as an anode/electrolyte. It is suggested to the applicant to rewrite this limitation as "said anode comprises zinc".

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the limitation "can-shaped container" is indefinite because the term "can-shaped" does not describe any shape and it does not properly modify the container since the container is a can. A can comes in a variety of shapes.

Claim 4 recites the limitation "said interior sidewalls" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claims depending from claims rejected under 35 USC 112, second paragraph are also rejected for the same.

*Allowable Subject Matter*

8. Claims 1,2, and 6 would be allowed if the above claim objections are addressed by the applicant.

9. Claims 3-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and objection to claim 1 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, Derksen (USP 2,468,430) does not disclose the limitation that the spring expands or is compressed with the application of a force or removal of a force, respectively. Derksen discloses a spring that is used to hold the battery and lamp in place in a battery case and a push button is provided on the battery case to allow oxygen into the battery case without movement of the spring.

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jammet (USP 3,855,000) discloses a space in the metal-air cell for permitting expansion of the negative electrode using a spring or compression means. Jammet does not disclose applying a force that separates an o-ring and a recess in order to form an inlet to introduce air or oxygen into the metal-air cell.

Art Unit: 1745

Mathews et al. (USP 4,177,327) disclose a vent cover of a battery case that is electrically powered by an actuator to open the vent cover during operation of a plurality of air cells inside the case.

Zatsky (USP 4,262,062) discloses a valve in a metal air cell that opens to allow oxygen or air into the cell with application of external pressure. Zatsky does not disclose an o-ring and a recess in a cover that provides for an inlet to allow oxygen or air into the cell.

McArthur et al. (USP 4,620,111) disclose a switch means for providing oxygen to a plurality of zinc air cells in a housing member wherein the switch means includes a slide valve.

Schumm Jr., (USP 5,837,394) discloses a battery that uses a microactuator to open or close a valve system.

12. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gabrielle Brouillette, can be reached at (703) 308-0756. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

Art Unit: 1745

The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/14 July 2001

  
**CAROL CHANEY**  
**PRIMARY EXAMINER**